REMARKS

This application has been reviewed in light of the Non-Final Office Action mailed January 30, 2006. Claims 1-18 and 27-32 are pending in this application.

I. REJECTION OF CLAIMS UNDER 35 U.S.C. § 103

A. The Examiner has rejected claims 1-3, 27-29 and 32 under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent Publication No. 2001/0038718 to Kumar et al. (hereinafter "Kumar") in view of U.S. Patent No. 5,652,717 to Miller et al. (hereinafter "Miller") or U.S. Patent Publication No. 2002/0060784A1 to Pack et al. (hereinafter "Pack").

Specifically, the Examiner alleges that Kumar discloses the claimed invention, however does not teach the claimed "ladar frames" or receiving ladar images. The Examiner then alleges that Miller and Pack both teach similar system where both use Ladar devices to capture Ladar images. Additionally, the Examiner alleges that it would have been obvious to modify Kumar's system to use Ladar images for better and accurate images that can also be used as range images.

It is well settled that to establish a *prima facie* case of obviousness, the prior art reference (or references when combined) must teach or suggest all the claim limitations. MPEP § 2143.03; In re. Royka, 180 U.S.P.Q. 580; Atlas Powder Co. v. E.I. DuPont De Nemours & Co.,750 F.2d 1569, 1575 (Fed. Cir. 1984). In the present case, the Examiner has failed to make the requisite *prima facie* case of obviousness. Indeed, neither Kumar, Miller nor Pack alone or in combination, teach, or even suggest the claimed invention.

Kumar patent teaches a method for mapping between camera coordinates and geo-coordinates, i.e. geo-spatial registration of imagery. Specifically, in Kumar a reference image pertaining to an image scene is accurately aligned with an input image scene captured by a sensor (such as a video camera) to achieve a high accuracy identification of locations within the scene .

Miller teaches an apparatus and method for collecting, analyzing and presenting geographical information. Specifically in Miller, geographically related information is received from plurality of sources and is processed and integrated into a generic Geographic Information System (GIS) to provide expanded information related to the geographic locations. In Column 3, lines 54- 58, Miller simply mentions laser imagery (lidar) as one of the means of providing geographically related information.

Pack teaches a 3D Multispectral Lidar system for producing geo-corrected 3D digital imagery. Specifically, in Pack, the system collects time-synchronous lidar range data and passive spectral images from within the same field of view. The lidar and the image data are then rectified from the relative position and orientation to an absolute position and orientation within a global coordinate system. Then, the lidar and image data are converted into 3D images.

Clearly, neither Miller nor Pack teach registering at least two of the plurality of ladar frames for determining a sensor pose with respect to a reference as recited in independent claims 1, 27 and 28. This is because, as discussed above, Miller simply refers to laser imagery without providing any details of processing such an imagery. Furthermore, as discussed above, even though Pack provides means for processing the lidar image, the lidar image in Pack is not processed in the manner as disclosed and claimed in the present invention.

Thus, neither of the references, Kumar, Miller or Pack, alone or in combination teach or suggest the registering at least two of the plurality of ladar frames for determining a sensor pose with respect to a reference as claimed in the present invention.

Moreover, both Miller and Pack simply provide a system to capture ladar images, without any need to register these images to determine a sensor pose. Thus, absent any teaching of registering at least two of the plurality of the ladar frames for determining a sensor pose with respect to a reference, it would not have been obvious to modify Kumar's system to use Ladar images for better and accurate images that can also be used as range images as allegedly provided by Miller and Pack.

Indeed, section 2143.01 of the MPEP specifically states that "[t]he mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination," [*In re Mills*, 916 F.2d 680, 16 USPQ2d 1430 (Fed. Cir. 1990)]. In the present case, there is no suggestion whatsoever to combine Kumar with Miller or Pack. Indeed, the Examiner appears to be employing the Applicant's disclosure as a blueprint to reconstruct the present invention by combining selected passages from the cited references. However, such use of hindsight is contrary to the Federal Circuit's admonition that in evaluating obviousness it is not proper to use the Applicant's disclosure as a template upon which the prior art is grafted, [MPEP § 2145, *In re Dembiczak*, 175 F.3d 994, 50 U.S.P.Q.2d 1614 (Fed. Cir., 1999)].

In light of the above and foregoing, it is respectfully submitted that Kumar in view of Miller or Pack, alone or in combination, fail to teach or suggest all of the features of the present invention as recited in claims 1-3, 27-29 and 32. Furthermore, as discussed above,

neither of these references provide any motivation or suggestion to combine in the manner proposed by the Examiner. Thus, the Applicant respectfully requests withdrawal of the rejection under 35 USC §103 rejection.

B. Claims 15-16 are rejected under 35. U.S.C. 103(a) as being unpatentable over Kumar in view of (Miller or Pack) and U.S. Patent No. 6078701 to Hsu et al. (hereinafter "Hsu').

Neither of the references, Kumar in view of (Miller or Pack) and Hsu alone or in combination teach or suggest the feature of registering at least two of the plurality of ladar frames for determining a sensor pose as recited in amended independent claim 1. Since, the amended independent claim 1 is patentable over the prior art, as discussed above, Applicant submits that the dependent claims 15 and 16 are allowable for the same reasons as advanced allowability of claim 1. Applicant respectfully requests withdrawal of the §103 rejection of claims 15 and 16.

C. Claims 6-11 and 13-14 are rejected under 35. U.S.C. 103(a) as being unpatentable over Kumar in view of (Miller or Pack) and U.S. Patent No. 5,999,662 to Burt et al. (hereinafter "Burt").

Neither of the references, Kumar in view of (Miller or Pack) and Burt alone or in combination teach or suggest the feature of registering at least two of the plurality of ladar frames for determining a sensor pose as recited in amended independent claim 1. Since, the amended independent claim 1 is patentable over the prior art, as discussed above, Applicant submits that the dependent claims 6-11 and 13-14 are allowable for the same reasons as advanced allowability of claim 1. Applicant respectfully requests withdrawal of the §103 rejection of claims 6-11 and 13-14.

D. Claims 17-18 are rejected under 35. U.S.C. 103(a) as being unpatentable over Kumar in view of (Miller or Pack) and anyone of U.S. Patent No. 5995681 to Lee et al. (hereinafter "Lee"), U.S. Patent No. 5251271 to Fling (hereinafter "Fling") or U.S. Patent No. 6759979 to Vashisth et al . (hereinafter "Vashisth").

Neither of the references, Kumar in view of (Miller or Pack) and anyone of Lee, Fling or Vashisth, alone or in combination teach or suggest the feature of registering at least two of the plurality of ladar frames for determining a sensor pose as recited in amended independent claim 1. Since, the amended independent claim 1 is patentable over the prior art, as discussed above, Applicant submits that the dependent claims 17-18 are allowable for the same reasons as advanced allowability of claim 1. Applicant respectfully requests withdrawal of the §103 rejection of claims 17-18.

II. ALLOWED CLAIMS

The Applicants thank the Examiner for allowing claims 4-5, 12 and 30-31 subject to rewriting and proper dependence.

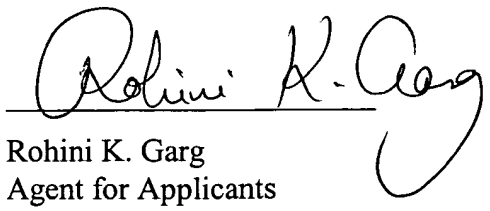
CONCLUSION

In view of the above amendment and remarks, Claims 1-18 and 27-32 are submitted to be allowable. Reconsideration and favorable action in this regard are therefore earnestly solicited.

If any additional fee is deemed necessary for this Amendment to be entered and considered by the Examiner, then the Commissioner is authorized to charge such fee to Deposit Account No. **501358**.

Applicants' undersigned agent may be reached by telephone at (973) 597-2500. All correspondence should continue to be directed to our address listed below.

Respectfully submitted,



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